Applicant's or agent's file reference number	BN 52 PCT	International application No.

23208

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13*bis*)

A. The indications made below relate to the microorganism referred to in the description on page 4, line 27.

B. IDENTIFICATION OF DEPOSIT — Further deposits are identified on an additional sheet ☐

Name of depositary institution: ECACC
European Collection of Cell Cultures

Address of depositary institution *(including postal code and country)*:
Centre for Applied Microbiology & Research
Salisbury
Wiltshire SP4 OJG
United Kingdom

Date of deposit	Accession Number
December 7, 2000	00120707

C. ADDITIONAL INDICATIONS *(leave blank if not applicable)* — This information is continued on an additional sheet ☐

In respect of all designated States to which such action is possible and to the extent that it is legally permissable under the law of the designated State, it is requested that a sample of the deposited microorganism be made available only by the issue thereof to an independent expert, in accordance with the relevant patent legislation, e.g., EPC Rule 28 (4); UK Patent Rules 1995, Schedule 2, Paragraph 3; Australian Regulation 3.25(3); Danish Patents Act Sections 22 and 33(3) and generally similar provisions mutatis mutandis for any other designated State.

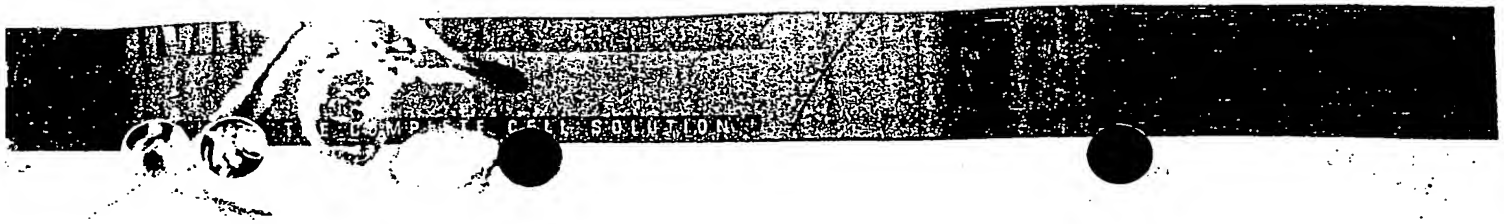
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE *(if the indications are not for all designated States)*

E. SEPARATE FURNISHING OF INDICATIONS *(leave blank if not applicable)*

The indications listed below will be submitted to the International Bureau later *(specify the general nature of the indications e.g., "Accession Number of Deposit")*

For receiving Office use only	For International Bureau use only
☐ This sheet was received with the international application	☐ This sheet was received by the International Bureau on:
Authorized officer	Authorized officer

Form PCT/RO/134 (July 1992)



ecacc
European Collection
of Cell Cultures

Centre for Applied Microbiology and Research
&
European Collection of Cell Cultures

This document certifies that Virus
(Deposit Ref. V00120707) has been accepted as a patent deposit,
in accordance with
The Budapest Treaty of 1977,
with the European Collection of Cell Cultures on 7TH December 2000

.....

Dr P J Packer
Quality Manager, ECACC

European Collection of Cell Cultures, CAMR, Salisbury, Wiltshire SP4 0JG UK
Tel: 44 (0) 1980 612512 Fax: 44 (0) 1980 611315 Email: ecacc@camr.org.uk Web Site: ecacc.org.uk

BUDAPEST TREATY ON THE INTERNATIONAL
RECOGNITION OF THE DEPOSIT OF MICROORGANISMS
FOR THE PURPOSES OF PATENT PROCEDURE

INTERNATIONAL FORM

TO

BAVARIAN NORDIC RESEARCH
INSTITUTE GMBH
FRAUNHOFERSTRASSE 18B
D-82152 MARTINSRIED
GERMANY

NAME AND ADDRESS
OF DEPOSITOR

I. IDENTIFICATION OF THE MICROORGANISM

Identification reference given by the DEPOSITOR:

..VA-575

Accession number given by the INTERNATIONAL DEPOSITARY AUTHORITY:

V00120707

II. SCIENTIFIC DESCRIPTION AND/OR PROPOSED TAXONOMIC DESIGNATION

The microorganism identified under I above was accompanied by:

[X] A scientific description

[ ] A proposed taxonomic designation

(Mark with a cross where applicable)

III. RECEIPT AND ACCEPTANCE

This International Depository Authority accepts the microorganism identified under I above, which was received by it on 7TH December 2000 (date of the original deposit)[1]

IV. RECEIPT OF REQUEST FOR CONVERSION

The microorganism identified under I above was received by this International Depository Authority on (date of the original deposit) and
A request to convert the original deposit to a deposit under the Budapest Treaty was received by it on (date of receipt of request for conversion)

IV. INTERNATIONAL DEPOSITORY AUTHORITY

Name: Dr P J Packer

Address: ECACC
CAMR
Porton Down
Salisbury SP4 OJG

Signature(s) of person(s) having the power to represent the International Depository Authority or of authorized officials(s):

Date:

1 Where Rule 6.4(d) applies, such date is the date on which the status of international depositary authority was acquired

Form BP/4 (Sole page) 1991

BUDAPEST TREATY ON THE INTERNATIONAL
RECOGNITION OF THE DEPOSIT OF MICROORGANISMS
FOR THE PURPOSES OF PATENT PROCEDURE

INTERNATIONAL FORM

TO

BAVARIAN NORDIC RESEARCH
INSTITUTE GMBH
FRAUNHOFERSTRASSE 18B
D-82152 MARTINSRIED
GERMANY

VIABILITY STATEMENT
Issued pursant to Rule 10.2 by the
INTERNATIONAL DEPOSITARY AUTHORITY
identified on the following page

NAME AND ADDRESS OF THE PARTY
TO WHOM THE VIABILITY OF STATEMENT
IS ISSUED

I. DEPOSITOR	II. IDENTIFICATION OF THE MICROORGANISM
Name: BAVARIAN NORDIC RESEARCH INSTITUTE GMBH Address: FRAUNHOFERSTRASSE 18B D-82152 MARTINSRIED GERMANY	Accession number given by the INTERNATIONAL DEPOSITORY AUTHORITY: 00120707 Date of the deposit or of the transfer:[1] 7TH December 2000

II. VIABILITY STATEMENT

The viability of the microorganism identified under II above was tested on _____[2]. On that date, the said microorganism was

☐[3] viable

☐[3] no longer viable

1 Indicate the date of the original deposit or, where a new deposit or a transfer has been made, the most relevant date (date of the new deposit or date of the transfer).

2 In the cases referred to in Rule 10.2 (a) (ii) and (iii), refer to the most recent viability test.

3 Mark with a cross the applicable box.

IV. CONDITIONS UNDER WHICH THE VIABILITY TEST HAS BEEN PERFORMED [4]
MVA-575 - V00120707 THIS VIRUS WAS TITRATED ON BHK CELLS $TC1D_{50} = 10^{6.5}$

V. INTERNATIONAL DEPOSITARY AUTHORITY	
Name: Dr P J Packer ECACC CAMR Address: Porton Down Salisbury Wiltshire SP4 0JG	Signature(s) of person(s) having the power to represent the International Depositary Authority or of authorized official(s): Date: 23/3/01

4 Fill in if the information has been requested and if the results of the test were negative.

Certificate of Analysis

Product Description MVA-575
Accession Number 00120707

Test Description: Determination of $TCID_{50}$ of cytopathic Virus titration. (SOP ECACC/055) Cell

Acceptance Criterion/Specification/Criteria: Negative controls should show no sign of Cytopathic effects. The Test Sample is serially diluted into in 4 wells of indicator cell lines for each dilution. Cytopathic effects indicate that virus is present. Virus titre is calculated using the below equation where x is the value obtained from a standard $TCID_{50}$ Table as a result of the distribution of the wells displaying less than 4 positive wells per dilution, and y is the value of the highest dilution where all 4 wells are positive:

$$TCID_{50} = \frac{1}{y} \times 10^{1+x}$$

Date: 19/01/01
Result:

Indicator Cell Line:	BHK 21 CLONE 13
Negative Control:	NO CPE
Test Sample:	CPE
Distribution of less that 4 positive wells:	4, 4, 0
X:	0.50
Y:	10^{-5}

$$TCID_{50} = \frac{1}{10^{-5}} \times 10^{1+0.50}$$

$$= 10^{6.5}$$

Overall Result: Virus Present

Test Description: The Detection of Mycoplasma by Isolation on Mycoplasma Pig Serum Agar and in Mycoplasma Horse Serum Broth.
SOP QC/MYCO/01/02

Acceptance Criterion/Specification: All positive controls (*M. pneumoniae & M. orale*) must show evidence of mycoplasma by typical colony formation on agar plates. Broths are subcultured onto Mycoplasma Pig Serum Agar where evidence of mycoplasma by typical colony formation is evaluated. All negative control agar plates must show no evidence of microbial growth.
The criteria for a positive test result is evidence of mycoplasma by typical colony formation on agar. A negative result will show no such evidence.

Test Number: 21702
Date: 12/02/01
Result:

Positive Control:	Positive
Negative Control:	Negative
Test Result:	Negative
Overall Result:	PASS

Authorised by.....ECACC, Head of Quality..... Date

Certificate of Analysis

Product Description MVA-575
Accession Number 00120707

Test Description: Detection of Mycoplasma using a Vero indicator cell line and Hoechst 33258 fluorescent detection system.
SOP QC/MYCO/07/05

Acceptance Criterion/Specification: The Vero cells in the negative control are clearly seen as fluorescing nuclei with no cytoplasmic fluorescence. Positive control (*M. orale*) must show evidence of mycoplasma as fluorescing nuclei plus extra nuclear fluorescence of mycoplasma DNA. Positive test results appear as extra nuclear fluorescence of mycoplasma DNA. Negative results show no cytoplasmic fluorescence.

Test Number: 21702

Date: 12/02/01

Result:

Positive Control:	Positive
Negative Control:	Negative
Test Result:	Negative
Overall Result:	PASS

Test Description: Detection of bacteria and fungi by isolation on Tryptone Soya Broth (TSB) and in Fluid Thioglycollate Medium (FTGM). SOP QC/BF/01/02

Acceptance Criterion/Specification: All positive controls (*Bacillis subtilus, Clostridium sporogenes* and *Candida albicans*) show evidence of microbial growth (turbidity) and the negative controls show no evidence of microbial growth (clear).
The criteria for a positive test is turbidity in any of the test broths. All broths should be clear for negative test result.

Test Number: 21702

Date: 12/02/01

Result:

Positive Control:	Positive
Negative Control:	Negative
Test Result:	Negative
Overall Result:	PASS

Authorised by.....ECACC, Head of Quality.....5/3/01..... Date

ecacc
European Collection of Cell Cultures

ECACC use only
Accession No:
Depositors Code:

Patent Deposit Accession Form - Virus

DEPOSITOR INFORMATION

Name of Depositor/Company/Institute: Bavarian Nordic Research Institute GmbH

(NB this will be the name that appears on certification)

Contact Name: Dr. Paul Howley, Dr. Petra Pielken

Depositor Address: Fraunhoferstraße 18b, D-82152 Martinsried, Germany

Tel No: 49 89 8565 0030 Fax No: ++49 89 8565 1333

BIOHAZARD STATEMENT MUST BE ENCLOSED

The deposit is made in accordance with the terms of the Budapest Treaty 1977. I agree to abide by the conditions and regulations regardi deposit of cell lines to the ECACC.

Signature: P. Pielken Date: 05.12.2000

Address to which invoice should be sent (if different from above)
Accounts Department, Bavarian Nordic Research Institute GmbH
Fraunhoferstraße 18b
D-82152 Martinsried, Germany

VIRUS INFORMATION

Name in full: Modified Vaccinia Virus Ankara
Abbreviated Name: MVA Identification on Ampoules:
Strain: No. 575 Serological Type:
Normal Host: None
Virus Titre Deposited:

VIRUS PROPAGATION

Host cells (first choice): Chicken Embryo Fibroblast (CEF)
Alternative Host Cells:

Details of Host Cell Growth (media, temperature, seeding density, growth factors etc)
Chicken Embryo Fibroblast Cultured in RPMI Media Supplemented with 10% FCS. AT 37°C/5%6CO2. No Growth Factors Needed.

Details of Virus Growth (eg confluency of host cells, co-cultivation, moi, effects, time taken)
Infect CEF Cell At Near Cell Confluency (Approx. 90%) At MOI 0,1 TCID50/Cell

VIRUS STORAGE Confluency; Infection Times on Average 3 Days At 37°C/5%CO2

Material stored (eg supernatant, infected cell extract, viable infected cells etc)
Temperature and conditions: Infected Cell Extract, At-80°C

VIRUS ASSAY

Method (enclose if necessary)
Does not form Plaques. It forms Foci of CPE in CEF Monolayers. Titrate by TCID50 Method - Reference:

LITERATURE REFERENCES (if any) Ingo Drexler et al. 2000 in Methods in Molecular Medicine Vol 35; Gene Therapy: Methods and Protocol s. Ed. W. Walther and U. Stein. Human Press

ANY OTHER RELEVANT INFORMATION
Virus Looses Viability At Low ph. Dilute Virus With Sterile IMM Tris-Hcl pH9 Buffer

European Collection of Cell Cultures, Centre for Applied Microbiology & Research
Salisbury, Wiltshire SP4 0JG, UK.
Tel: +44 1980 612512 *Fax:* +44 1980 611315
E.Mail: ecacc@camr.org.uk *Web Site:* www.camr.org.uk

CAMR
Today's Research Tomorrow's Health

REGISTERED FIRM
No. FS33819

ecacc
European Collection of Cell Cultures

ECACC use only

Accession No:

Depositors Code:

BIOHAZARD STATEMENT

(To be included with all deposits)

Deposit category

Cell Culture ☐ Plant Culture ☐ Virus Recombinant DNA ☐ DNA Probe ☐ Bacteria ☐

Does the above deposit represent an infectious, toxic or allergenic hazard? Yes ☐ No ☒

If yes, please give details and any associated hazard category (eg. ACDP category) and fax to ECACC PRIOR to shipment of cells.

MVA is classified into biosafety level 1 (S1) by ZKBS

File No.: 6790-10-14

Date: May 1997

Does the above deposit contain genetically manipulated material? Yes ☐ No ☒

If yes, please enclose a general description and answer the following:

a. is the material DNA ☐ RNA ☐

b. is the material present in a host organism? Yes ☐ No ☐

c. is the genetic material readily transferred to environmental organisms? Yes ☐ No ☐

d. is the genetic material likely to be expressed as protein? Yes ☐ No ☐

e. what is the category of this material under ACGM regulations?

ie, i. containment level _____

ii. GMO type _____

For any positive responses to questions b-d please give details

Please supply any further details which would be relevant to assessing the safe handling conditions for materials to be deposited at ECACC.

Signed P. Pielken Date 05.10.20[illegible]

Print name Dr. Petra Pielken

Please note that deposits which are, or contain, animal pathogens require an import licence into the EC. Please allow 8 weeks for this proce submit information requested by ECACC for licence applications as quickly as possible.

CAMR
Today's Research
Tomorrow's Health

European Collection of Cell Cultures, Centre for Applied Microbiology & Research
Salisbury, Wiltshire SP4 0JG, UK.
Tel: +44 1980 612512 *Fax:* +44 1980 611315
E.Mail: ecacc@camr.org.uk *Web Site:* www.camr.org.uk